Supplementary Data

Supplemental Table 1. Search strategy for MEDLINE

"follow-up" OR cohort OR survival OR mortality OR "all-cause mortality"	AND	dairy OR milk OR yogurt OR cheese OR kefir OR butter OR "dairy products"	AND	meta OR review

Supplemental Table 2. Covariates considered in the analysis of the cohorts included in the meta-analysis.

Author	Covariates included in the analyses	Meta-analyses including each paper
Kahn et al. (S1)	Age, sex, smoking, history of vascular disease, hypertension, and diabetes	12, 13, 15, 18
Mann et al. (S2)	Age, sex, smoking, and social class	12-19
Ness et al. (S3)	Age, smoking, BP, cholesterol, BMI, forced expiratory volume, social class, education, deprivation, siblings, car user, angina, ECG ischemia, bronchitis, and alcohol	12-15, 17, 18
Elwood et al. (S4)	Age, smoking, social class, IHD, BMI, energy, alcohol, fasting cholesterol, HDL cholesterol and triglycerides	12-15, 17, 18
Trichopoulou et al. (S5)	Age, gender, smoking, education, weight and height, hip circum., insulin, hypertension, hypercholesterolemia, and food groups	12, 17
van der Pols et al. (S6)	Age, sex, area, energy, fruit, vegetables, eggs, protein, fat, and energy	12
Fortes et al. (S7)	Age, sex, education, BMI, smoking, cognitive function, and chronic diseases	13, 16-19
Knoops et al. (S8)	Age, sex, alcohol, physical activity, smoking, number of years of education, BMI, chronic diseases, and study center	13, 17, 18
Paganini-Hill et al. (S9)	Age, sex, smoking, exercise, BMI, alcohol, hypertension, angina, MI, stroke, diabetes, rheumatoid arthritis, and cancer	13-15, 17, 18
Engberink et al. (S10)	Age, sex, BMI, SBP, total cholesterol, family history of MI, use of estrogens, smoking, educational level, alcohol consumption, total energy, saturated fat, and intake of fruit, vegetables, meat, fish, coffee, and tea	13, 18
Bonthuis et al. (S11)	Age, sex, total energy intake, body mass index, alcohol intake, school leaving age, physical activity level, pack years of smoking, dietary supplement use, b-carotene treatment during trial, presence of any medical condition, and dietary calcium intake	13-17, 19
Goldbohm et al. (S12)	Age; education; cigarette, cigar, or pipe smoking; non-occupational physical activity; occupational physical activity; BMI; multivitamin use; alcohol; energy; energy-adjusted mono- and polyunsaturated fat intakes; and vegetable and fruit consumption	13-16, 19

Author, country	Covariates included in the analyses	Meta-analyses including each paper
Dalmeijer et al. (S13)	Gender, age, total energy intake, physical activity, smoking, education, BMI, ethanol, coffee, fruit, vegetables, fish, meat and bread	13
Soedamah-Muthu et al. (S14)	Age, ethnicity, employment grade, smoking, alcohol intake, BMI, physical activity, family history of CHD/ hypertension, and fruit, vegetable, bread, meat, fish, coffee, tea and total energy intake	13-15, 17, 19
van Aerde et al. (S15)	Age, sex, BMI, smoking, educational level, total energy intake, alcohol consumption, physical activity and intake of meat, fish, bread, vegetables, fruit, coffee, and tea	13, 15, 17, 19
Huang et al. (S16)	Age, gender, BMI, region, ethnicity, education level, marriage, history of disease (cardiovascular disease and/or cancer), smoking, drinking, chewing betel nut, supplement use, overall Dietary Index–Revised (dairy score excluded), calcium intake, and vitamin D intake	13, 17
Michaelsson et al. (S17)	Age, body mass index, height, total energy intake, total alcohol intake, healthy dietary pattern, calcium and vitamin D supplementation, historic use of cortisone, educational level, living alone, physical activity level estimated as metabolic equivalents, smoking status, and Charlson's comorbidity index; in women, use of estrogen replacement therapy and nulliparity	13-15, 17
Praagman et al. (S18)	Age, sex, total energy intake, smoking habit, BMI, physical activity, education level, hypertension at baseline, intakes of alcohol and energy, and adjusted intakes of fruit and vegetables	13, 19
Wang et al. (S19)	Age categories, smoking status, drinking status, physical activity, sleeping duration, body mass index, education level, participation in health check-ups, green-leafy vegetable intake, and history of hypertension, diabetes, and liver disease	13, 14, 17
Dik et al. (S20)	Age, sex, center, smoking, pre-diagnostic BMI, tumor sub-site (colon or rectum), disease stage, differentiation grade, and total energy intake	14
Yang et al. (S21)	Age, sex, tumor stage and folate and total energy intake	14

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Author, country	Covariates included in the analyses	Meta-analyses including each paper
Fraser et al (S22)	Age, sex, BMI, smoking, cognitive status, medical history, and education	16, 19
Whiteman et al. (S23)	Age, sex, smoking, alcohol, and SES	16
Sluik et al. (S24)	Age and center-stratified; adjusted for gender, education, underlying dietary patterns, alcohol consumption, smoking, physical activity and prevalence of heart disease, cancer or stroke.	17
Boggs et al. (S25)	Age, each DASH component, total energy intake, education, marital status, physical activity, TV watching, smoking, and alcohol	17
Bongard et al. (S26)	Age, center, income, obesity, alcohol, smoking, physical activity, chronic disease, and diet quality score	17
Fraser et al. (S27)	Age, smoking, and physical activity	17, 19
Hays et al. (S28)	Age, living alone, poverty, smoking, alcohol, cognitive status, and self-rated health	17
Kouris-Blazos et al. (S29)	Age, energy intake, sex, smoking, and ethnic origin	17
Kurotani et al. (S30)	Age; sex; public health center area; BMI; smoking; physical activity; history of hypertension, diabetes or dyslipidemia; coffee and green tea consumption; and occupation	17
Martinez-Gonzalez et al. (S31)	Age, years of university education, BMI, smoking, physical activity, TV watching, history of depression, and baseline hypertension, hypercholesterolemia, energy intake, egg consumption, potato consumption, and adoption of special diets, in addition to all the other items in the Mediterranean Diet Score	17
Prinelli et al. (S32)	Age, sex, education, BMI, physical activity, smoking, time spent TV watching, and energy intake	17
Trichopoulou et al. (S33)	Age, sex, education, smoking, waist-to-hip ratio, BMI, physical activity, and energy intake	17
Vormund, 2015, Switzerland (S34)	Age, sex, survey wave, marital status, smoking, BMI, region and nationality, mutually adjusted	17

Author, country	Covariates included in the analyses	Meta-analyses including each paper
Yu, 2015, USA (S35)	Age, race, enrollment source, income, marital status, medical insurance, smoking, physical activity, sitting time, energy intake, BMI, menopausal status, hormone therapy, disease status, education, and standardized HEI score without dairy	17
Yu, 2014, China (S36)	Age, education, income, smoking, alcohol, multivitamin, menopausal status and hormone therapy, physical activity, BMI, waist-to-hip ratio, history of cardiovascular disease, diabetes, or hypertension, and energy intake	17

BMI: body mass index; BP: blood pressure; CHD: coronary heart disease; DASH: disabilities of the arm, shoulder and hand; ECG: electrocardiography; HDL: high density lipoprotein; HEI: healthy eating index; IHD; ischemic heart disease; MI: myocardial infarction; SES; socioeconomic status; SBP: systolic blood pressure; TV: television.

Supplemental Table 3. Risk of bias assessed using the AMSTAR2 tool.

Author	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	Total	Risk of bias
Elwood et al. (12)	Y	Y	Y	Y	N	N	N	Y	N	N	Y	N	N	Y	N	Y	8	Acceptable
Guo et al. (13)	Y	Y	Y	Y	N	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	13	Very good
Larsson et al. (14)	Y	Y	Y	Y	N	N	N	Y	N	N	Y	N	N	Y	N	Y	8	Acceptable
Mullie et al. (15)	Y	Y	Y	Y	N	N	N	Y	N	N	Y	N	N	Y	Y	Y	9	Good
O´Sullivan et al. (16)	Y	Y	Y	Y	Y	Y	N	Y	Y	N	Y	Y	Y	Y	Y	Y	14	Very good
Schwingshackl et al. (17)	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	N	Y	Y	Y	Y	Y	14	Very good
Soedamah-Muthu et al. (18)	Y	Y	Y	Y	Y	Y	N	Y	N	N	Y	N	N	Y	Y	Y	12	Very good
Tong et al. (19)	Y	Y	Y	Y	N	N	N	Y	N	N	Y	N	N	Y	Y	Y	9	Good

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Supplemental Table 4. Certainty of evidence in systematic reviews and meta-analyses for all-cause mortality outcome assessed using GRADE.

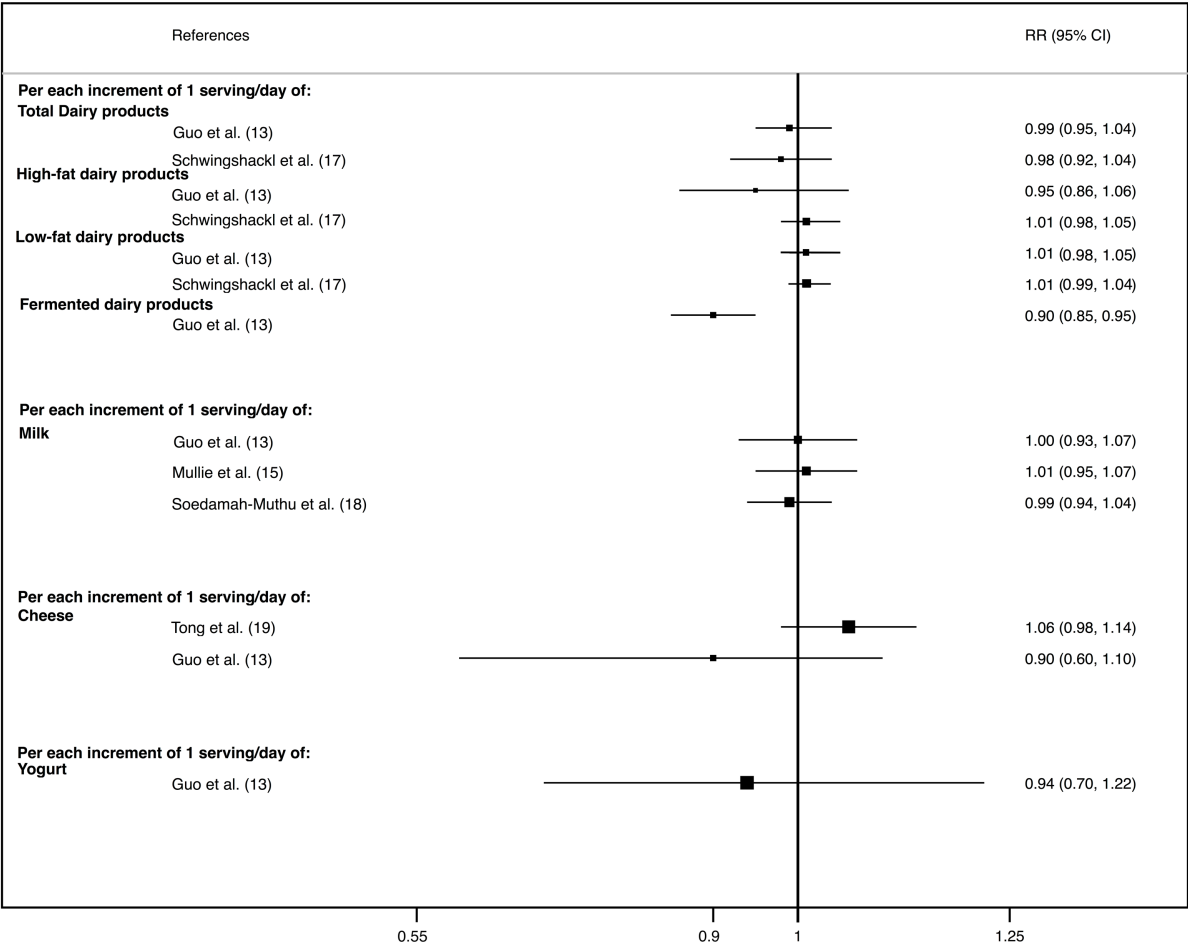| Reference	n, studies	Study design	Risk of bias[1]	Inconsistency[2]	Indirectness	Imprecision	Other considerations	n, total	n, cases (%)	RR (95% CI)	Absolute risk[9]	Certainty	Importance
								n, participants		**Effect**			
Elwood et al. (12)	6	Cohort studies	serious	very serious	serious[3]	not serious	publication bias strongly suspected all plausible residual confounding would suggest spurious effect, while no effect was observed[7]	24466	5092 (20.8%)	**0.87** (0.77 to 0.98)	Less than 1 case per 1,000 population	⊕○○○ VERY LOW	CRITICAL
Guo et al. (13)	17	Cohort studies	not serious	serious	not serious	serious[5]	all plausible residual confounding would suggest spurious effect, while no effect was observed dose response gradient	175063	21222 (12.1%)	**0.99** (0.96 to 1.03)	Less than 1 case per 1,000 population	⊕⊕○○ LOW	CRITICAL
Larsson et al. (14)	13	Cohort studies	serious	serious	not serious	serious[6]	publication bias strongly suspected all plausible residual confounding would suggest spurious effect, while no effect was observed dose response gradient[7]	367505	81401 (22.1%)	not estimable		⊕○○○ VERY LOW	CRITICAL
Mullie et al. (15)	10	Cohort studies	serious	very serious	not serious	serious[5]	publication bias strongly suspected all plausible residual confounding would suggest spurious effect, while no effect was observed dose response gradient[8]	281788	63545 (22.6%)	**1.01** (0.96 to 1.06)	Less than 1 case per 1,000 population	⊕○○○ VERY LOW	CRITICAL
O´Sullivan et al. (16)	6	Cohort studies	not serious	not serious	serious[4]	serious[5]	publication bias strongly suspected all plausible residual confounding would suggest spurious effect, while no effect was observed[8]	43797	17272 (39.4%)	**1.01** (0.92 to 1.11)	Less than 1 case per 1,000 population	⊕○○○ VERY LOW	CRITICAL

Supplementary Data

Reference	n, studies	Study design	Certainty assessment					n, participants		Effect		Certainty	Importance
			Risk of bias[1]	Inconsistency[2]	Indirectness	Imprecision	Other considerations	n, total	n, cases (%)	RR (95% CI)	Absolute risk[9]		
Schwingshackl et al. (17)	26	Cohort studies	not serious	very serious	serious[4]	serious[5]	publication bias strongly suspected all plausible residual confounding would suggest spurious effect, while no effect was observed dose response gradient[8]	938817	126759 (13.5%)	**1.03** (0.98 to 1.07)	Less than 1 case per 1,000 population	⊕○○○ VERY LOW	CRITICAL
Soedamah-Muthu et al. (18)	8	Cohort studies	not serious	serious	not serious	serious[5]	all plausible residual confounding would suggest spurious effect, while no effect was observed dose response gradient	62779	23949 (38.1%)	**0.99** (0.95 to 1.03)	Less than 1 case per 1,000 population	⊕⊕○○ LOW	CRITICAL
Tong et al. (19)	8	Cohort studies	serious	not serious	not serious	serious[5]	all plausible residual confounding would suggest spurious effect, while no effect was observed dose response gradient	177657	21365 (12.0%)	**1.03** (0.99 to 1.07)	Less than 1 case per 1,000 population	⊕⊕○○ LOW	CRITICAL

RR: risk ratio; CI: Confidence interval.

[1] Based on AMSTAR tool score. From 1 to 5: not serious; from 6 to 10: serious; and from 11 to 16: very serious; [2] Based on I^2. From 0 to 40%: not serious; from 40 to 80%: serious; and from 80 to 100% and not reported: very serious; [3] The original studies are not aimed at measuring the association; [4] Dairy products consumption is not the main observation; [5] CI includes the null value; [6] No reported by the meta-analysis; [7] Does not assess publication bias or find publication bias by Egger test; [8] Find publication bias by Egger test; [9] For dairy products consumption.

Supplementary Data

Supplemental Figure 1. Forest plot for each dairy product consumption increment of 1 serving/day in adults.

References	RR (95% CI)
Per each increment of 1 serving/day of:	
Total Dairy products	
Guo et al. (13)	0.99 (0.95, 1.04)
Schwingshackl et al. (17)	0.98 (0.92, 1.04)
High-fat dairy products	
Guo et al. (13)	0.95 (0.86, 1.06)
Schwingshackl et al. (17)	1.01 (0.98, 1.05)
Low-fat dairy products	
Guo et al. (13)	1.01 (0.98, 1.05)
Schwingshackl et al. (17)	1.01 (0.99, 1.04)
Fermented dairy products	
Guo et al. (13)	0.90 (0.85, 0.95)
Per each increment of 1 serving/day of:	
Milk	
Guo et al. (13)	1.00 (0.93, 1.07)
Mullie et al. (15)	1.01 (0.95, 1.07)
Soedamah-Muthu et al. (18)	0.99 (0.94, 1.04)
Per each increment of 1 serving/day of:	
Cheese	
Tong et al. (19)	1.06 (0.98, 1.14)
Guo et al. (13)	0.90 (0.60, 1.10)
Per each increment of 1 serving/day of:	
Yogurt	
Guo et al. (13)	0.94 (0.70, 1.22)

RR: risk ratio; CI: confidence interval

Supplementary data

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